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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/523,342
Filing Date: January 27, 2005
Appellant(s): HORTON ET AL.

Hani Z. Sayed
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 05/09/2008 appealing from the Office action mailed 11/09/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,857,677	Tanaka et al.	3/1989
3,311,718	Allison et al.	3/1967

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 – 8 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 4 - 5, it is not clear what is meant by “wherein the detent subassembly is enclosed and operates independent of the knob.” According to Figure 3, the knob 305 is connected to shaft 365 by screw 307 and the detent subassembly comprises sprocket 326, rotor 324, spring 320, ball 322 and cap 315 (instant specification page 5, second paragraph) and sprocket 326 is held by locking screw 329 against bushing 355, and the rotation of shaft 365 causes rotor 324, spring 320 with associated balls 322 and electrical contacts to rotate (page 5, third paragraph). Thus part of the detent subassembly rotates by rotation of the knob and therefore, the recitation “wherein the detent subassembly is enclosed and operates independent of the knob” is contrary to the disclosure.

Regarding Claim 2, it is not clear, what is meant by “operation of detent subassembly is not altered by the removal of the knob”. If the knob is removed, the shaft can not be rotated (unless rotated by other means, and the other means will

provide same function as the knob), and the switch assembly can not be operated.

What constitutes “operation” of detent subassembly?

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. [US 4,857,677] in view of Allison et al. [US 3,311,718].

Regarding Claims 1, 5, 6 and 9 - 12, Tanaka et al. disclose a rotary switch mounted above and below a panel, comprising:

- a panel [11];
- a rotary switch [41, 42, 29, 30] mounted below the panel;
- a circuit board [12] with contacts [switches 41, 42 have contacts];
- a knob [44] that substantially covers the detent sub-assembly [32, 36 – 38], the detent sub-assembly operates with the knob.

Examiner’s note: if the knob is removed, the disclosed by Tanaka et al. detent sub-assembly is capable of being operated independent of the knob.

Regarding Claims 1, 5, 6 and 9 - 12, Tanaka et al. disclose the instant claimed invention except for a sealing member disposed between a portion of the switch and

Art Unit: 2800

underside of the panel and only a bushing and shaft extends through the panel. Allison et al. disclose a switch assembly, with a seal [17]. The seal will be between a portion of the switch and underside of the panel upon mounting the switch assembly to a panel (panel not shown). Allison et al. also disclose a switch with sliding contacts and only a bushing and shaft [12, 24] extend through the panel. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a seal between the panel and the switch and design the switch so that only a bushing and shaft extends through the panel, in Tanaka et al., as suggested by Allison, in order to prevent dirt entering the switch area below the panel and to simplify the switch design.

Regarding Claim 2, as best understood, the operation of detent sub-assembly is not altered by removal of the knob. Regarding Claims 3 and 12, Tanaka et al. disclose arrangement with a spring [36] and a single ball [37]. Regarding Claim 4, the ball will not extend into the panel. Regarding Claims 7 and 8, Tanaka discloses sprocket [portion of 32] with cylindrical lobes [32b] that cooperates with a spring [36], the shaft [24] and rotor [24a, Allison] to set a switch position; the switch position defines the electrical circuit. Regarding Claim 10, the method steps are disclosed by Tanaka et al.; the user can select circuit by rotating the knob.

Terminal Disclaimer

The terminal disclaimers filed on 1/9/2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of Patent Number 7,109,430 and Application Number 11/485,249 have been reviewed and is accepted.

The terminal disclaimers have been recorded.

(10) Response to Argument

Appellant's arguments filed 5/9/08 have been fully considered but they are not persuasive.

The Terminal Disclaimer filed by the Appellant on 1/9/08 has been approved, hence the nonstatutory double patenting rejection, has been withdrawn.

Claims 1- 8 and 12 have been rejected on 35 USC, 112 second paragraph. In claim 1, the recitation "...wherein the detent sub-assembly is enclosed and operates independent of the knob," is unclear. The Appellant has tried to clarify the recitation by explaining that "in the present subject matter, the detent sub-assembly is fully enclosed independent of the knob (i.e.-not housed in the knob). The knob 175 is simply held to the shaft by one or more locking screws 177, and the operation of the detent sub-assembly 180 is not altered by removal of the knob 175.

The Examiner wishes to point out that, fully enclosed does not mean operates independent of the knob. For operation" of "the detent sub-assembly" sprocket 326 [Figure 3] is held stationary by screw 329 to the bushing 355, and rotor 324 is rotated by the shaft 365, so that balls 322 are moved along the inner surface of the lobes 328, thereby achieving indexing by the detent sub-assembly. The shaft 365 can only be rotated by the knob 305, as the shaft is fixed to the knob by locking screw 307, the detent sub-assembly can not itself rotate the shaft. While, the detent sub-assembly can be considered enclosed independent of the knob, for "operation" of the detent sub-

assembly, the shaft has to be rotated by the knob and therefore, the detent sub-assembly can not be considered to “operate” independent of the knob. It is further noted that the sprocket 326 is held stationary, and can not be rotated, and the only way the detent sub-assembly can be operated, is to rotate the shaft 365. As to the applied art of Tanaka, the detent sub-assembly [Figures 5 and 6] comprises sub-housing 32, ball 37, member 38 with flange 38a and spring 36. Thus the detent sub-assembly is independently housed of the knob 44 and in this case the detent sub-housing 32, if rotated [by hand], the ball moves along the grooves 35 located in the inner surface 32b of detent sub-housing thereby providing indexing sound, and as such the detent sub-assembly is independently housed of the knob 44 and can be operated without the knob.

Regarding the rejection based on 35 USC 103(a) on Tanaka in view of Allison, the Appellant has pointed out a line in the rejection which states “the detent assembly operates with the knob”, whereas the claim recites “the detent subassembly is enclosed and operates independent of the knob”.

The Examiner has extensively discussed above the reason why the Examiner believes, that the detent subassembly of the instant invention can not operate independent of the knob, and also has provided evidence that the detent subassembly of Tanaka is enclosed in the knob and is capable of operating independent of the knob.

Regarding Claim 10, The Appellant has stated “Tanaka et al. does indeed disclose a switch with a sub-assembly on the user side of the panel, but fails to teach, suggest, or motivate a knob that substantially covers the detent sub-assembly and is

independent of the detent sub-assembly.” The Examiner respectfully disagrees. Tanaka [Figures 3 and 5] discloses the detent sub-assembly [32, 36 – 38] substantially covered by the knob [44] and the detent sub-assembly is independent of the knob, thereby satisfying Claim 10, limitations. The argument that the knob “is independent of the detent sub-assembly” is not part of the Claim 10.

As to rejection of Claims 2 - 8 and 12, the Appellant has argued “in setting forth its *prima-facie* case of obviousness, the Office argued that the motivation for combining the references was reduced cost and compactness of the housing and all the other elements listed above. That argument is ineffective where one of ordinary skill in the art would have expected the claimed combination to fail. Here, one of ordinary skill in the art would have expected the claimed combinations to fail because such a person would have to explore further prior art references to obtain the elements needed to come up with the present invention. Thus, the Office further fails to provide sufficient motivation to combine the cited references.”

At the outset, the Examiner wishes to point out that the Final Rejection mailed on 11/9/2007, the Examiner has stated “to provide a seal between the panel and the switch and design the switch so that only a bushing and shaft extends through the panel, in Tanaka et al., as suggested by Allison, in order to prevent dirt entering the switch area below the panel and to simplify the switch design” as motivation, and as such the argument presented is inaccurate.

Art Unit: 2800

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Marina Fishman/
Examiner, Art Unit 2832

Conferees:

Elvin Enad /EGE/ SPE

David Blum/David S Blum/

TQAS Appeal Specialist, TC 2800